

Amendments to the Claims:

At page 13, line 1, change "Claims" to --What is claimed is:--.

Cancel claims 1-25, without prejudice.

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. – 25. (cancelled)

26. (new) A plate package for a plate heat exchanger comprising:

at least two plate modules each including at least two heat exchanger plates, each of which has a primary side and a secondary side and is compression-molded to extend at at least an intermediate plane, an upper plane, and a lower plane with respect to the primary side, which planes are substantially parallel to each other,

wherein the two heat exchanger plates are permanently connected to each other such that the heat exchanger plates form an inner first space between the secondary sides of the heat exchanger plates,

wherein the plate modules are mounted adjacent to each other and form a second space between each other,

wherein each heat exchanger plate includes a first porthole and a second porthole, which are arranged to permit communication with the first space,

wherein each of the first and second portholes is defined by a port edge and surrounded by a ring groove, which is adapted to receive a gasket member and provided at the primary side at a distance from the port edge,

wherein the ring groove is formed by a bottom, which is substantially positioned at the level of the intermediate plane, an inner lateral limitation that extends upwardly from the bottom in a direction towards the port edge and around the bottom and an outer lateral limitation that extends upwardly from the bottom away from the port edge and around the bottom, and

wherein the outer lateral limitation forms a surface which extends without any interruptions substantially continuously around the whole bottom and the inner lateral limitation has a discontinuous extension around the bottom and includes interruptions along the extension.

27. (new) A plate package according to claim 26, wherein each heat exchanger plate includes an inner border area at each of the first and second portholes, wherein the inner border area extends around the port edge between the inner port edge and the inner lateral limitation and wherein the inner border area includes a plurality of lower portions which form the interruptions and extend from the bottom and through the inner lateral limitation.

28. (new) A plate package according to claim 27, wherein the lower portions are positioned substantially at the level of the lower plane.

29. (new) A plate package according to claim 28, wherein the heat exchanger plates in the plate modules are arranged such that the heat exchanger plates at the secondary side abut each other at the lower portions.

30. (new) A plate package according to claim 27, wherein the lower portions extend up to the port edge.

31. (new) A plate package according to claim 27, wherein the inner border area beside the lower portions includes a plurality of upper portions which are located at a level above the intermediate plane such that the inner border area includes lower portions and upper portions in an alternating order.

32. (new) A plate package according to claim 31, wherein the upper portions are located at a level which lies just below the upper plane.

33. (new) A plate package according to claim 26, wherein each heat exchanger plate includes an outer border area which extends around the outer lateral limitation immediately outside the outer lateral limitation, wherein the outer border area has an upper ring-shaped surface which is located at the level of the upper plane.

34. (new) A plate package according to claim 26, wherein the bottom of the ring groove in a cross-section has a somewhat concave shape seen from the primary side.

35. (new) A plate package according to claim 34, wherein the bottom at the cross-section has a central, substantially planar portion which extends around the ring groove, an inner inclined portion, which extends around the ring groove towards the inner lateral limitation, and an outer inclined portion, which extends around the ring groove towards the outer lateral limitation.

36. (new) A plate package according to claim 26, wherein the gasket member includes a ring gasket having an elongated cross-sectional shape.

37. (new) A plate package according to claim 26, wherein the gasket member includes two ring gaskets, each of which has a substantially circular cross-sectional shape in a non-compressed state.

38. (new) A plate package according to claim 26, wherein the gasket member includes an attachment member for attachment of the gasket member in the ring groove.

39. (new) A plate package according to claim 38, wherein the attachment member extends inwardly towards the porthole and engages the port edge.

40. (new) A plate heat exchanger comprising a plate package according to claim 26.

41. (new) A plate module for a plate package for a plate heat exchanger, the plate module comprising:

at least two heat exchanger plates, each of which has a primary side and a secondary side and is compression-molded to extend at at least an intermediate plane, an upper plane, and a lower plane with respect to the primary side, which planes are substantially parallel to each other,

wherein the two heat exchanger plates are permanently connected to each other such that the heat exchanger plates form an inner first space between the secondary sides of the heat exchanger plates,

wherein each heat exchanger plate includes a first porthole and a second porthole, which are arranged to permit communication with the first space,

wherein each of the first and second portholes is defined by a port edge and surrounded by a ring groove, which is adapted to receive a gasket member and provided at the primary side at a distance from the port edge,

wherein the ring groove is formed by a bottom, which is substantially positioned at the level of the intermediate plane, an inner lateral limitation that extends upwardly from the bottom in a direction towards the port edge and around the bottom and an outer lateral limitation that extends upwardly from the bottom away from the port edge and around the bottom, and

wherein the outer lateral limitation forms a surface which extends without any interruptions substantially continuously around the whole bottom and the inner lateral limitation has a discontinuous extension around the bottom and includes interruptions along the extension.

42. (new) A plate module according to claim 41, wherein the plate module is adapted to be mounted adjacent to a similar plate module in a plate package for forming a second space between the plate modules.

43. (new) A plate module according to claim 41, wherein each heat exchanger plate includes an inner border area at each of the first and second portholes, wherein the inner border area extends around the port edge between the port edge and the inner lateral limitation and wherein the inner border area includes a plurality of lower portions which form the interruptions and extend from the bottom through the inner lateral limitation.

44. (new) A plate module according to claim 43, wherein the lower portions are positioned substantially at the level of the lower plane.

45. (new) A plate module according to claim 43, wherein the lower portions extend up to the port edge.

46. (new) A plate module according to claim 43, wherein the inner border area beside the lower portions includes a plurality of upper portions which are positioned at a level above the intermediate plane such that the inner border area includes lower portions and upper portions in an alternating order.

47. (new) A plate module according to claim 46, wherein the upper portions are located at a level which lies just below the upper plane.

48. (new) A plate module according to claim 41, wherein each heat exchanger plate includes an outer border area which extends around the outer lateral limitation immediately outside the outer lateral limitation, wherein the outer border area has an upper ring-shaped surface located at the level of the upper plane.

49. (new) A plate module according to claim 41, wherein the bottom of the ring groove in a cross-section has a somewhat concave shape seen from the primary side.

50. (new) A plate module according to claim 49, wherein the bottom at the cross-section has a central substantially planar portion which extends around the ring groove, an inner inclined portion, which extends around the ring groove to the inner lateral limitation, and an outer inclined portion, which extends around the ring groove to the outer lateral limitation.